

Spring Head of Old River						
Year	Installation			Removal		
	Started	Closed	Completed	Started	Breached	Completed
1992	15-Apr	No Data	26-Apr	2-Jun	No Data	8-Jun
1993	No Data					
1994	21-Apr	No Data	23-Apr	18-May	No Data	20-May
1995	(ii)	(ii)	(ii)	N/A	N/A	N/A
1996	6-May	No Data	11-May	16-May	16-May	03-Sep (xvi)
1997	9-Apr	No Data	16-Apr	15-May	No Data	19-May
1998	(ii)	(ii)	(ii)	N/A	N/A	N/A
1999	(ii)	(ii)	(ii)	N/A	N/A	N/A
2000	5-Apr	No Data	16-Apr	19-May	No Data	2-Jun
2001	17-Apr	No Data	26-Apr	23-May	No Data	30-May
2002	2-Apr	No Data	18-Apr	22-May	24-May	7-Jun
2003	1-Apr	15-Apr	21-Apr	16-May	18-May	3-Jun
2004	1-Apr	15-Apr	21-Apr	19-May	24-May	10-Jun
2005	(ii)	(ii)	(ii)	N/A	N/A	N/A
2006	(ii)	(ii)	(ii)	N/A	N/A	N/A
2007	11-Apr	20-Apr	26-Apr	19-May	22-May	6-Jun
2008	(iv)	(iv)	(iv)	N/A	N/A	N/A
2009	No Data (ix)					
2010	5-Apr (ix)	No Data (ix)	16-Apr (ix)	No Data (ix)	No Data (ix)	No Data (ix)
2011	(x)	(x)	(x)	N/A	N/A	N/A
2012	15-Mar	1-Apr	11-Apr	1-Jun	4-Jun	20-Jun
2013	(v)	(v)	(v)	N/A	N/A	N/A
2014	25-Mar	8-Apr	11-Apr	28-May	9-Jun	26-Jun
2015	16-Mar	3-Apr	8-Apr	27-May	1-Jun	8-Jun
2016	10-Mar	1-Apr	4-Apr	27-May	1-Jun	14-Jun
2017	(ii)	(ii)	(ii)	N/A	N/A	N/A
2018	16-Mar	(ii)	(ii)	17-May	N/A	17-May
2019	(ii)	(ii)	(ii)	N/A	N/A	N/A
2020	(xx)	(xx)	(xx)	N/A	N/A	N/A
2021	(xx)	(xx)	(xx)	N/A	N/A	N/A

- i. Not installed upon DFG's request.
- ii. Not installed due to high San Joaquin River flows.
- iii. Not installed because existing flows and dissolved oxygen levels in the San Joaquin River were sufficient for Chinook Salmon.
- iv. Not installed in accordance with Wanger decision to protect Delta Smelt.
- v. Not installed due to uncertainty about the benefits of installing the barrier to salmonid survival through the Delta.
- vi. Installation delayed due to high flows.
- vii. Completion delayed due to high flows.
- viii. Started south abutment construction to replace culverts, using barge and crane from shoreline.
- ix. Installed non-physical "Bubble Barrier" as a pilot test to prevent salmon from entering Old River.
- x. Not installed non-physical "Bubble Barrier" as planned due to high velocity currents in the San Joaquin River that posed excessively dangerous conditions for divers and ruled out the possibility of installing the necessary equipment on the channel bottom.
- xi. Only above water portion of boat ramps constructed due to high flows. North abutment not installed until full closure of barrier.
- xii. The flashboard structure washed out due to high flows and will be re-constructed at a later date. The weir section elevation had to be reduced to accommodate the high flow. All 6 culverts were in tidal position (closed).
- xiii. The flashboard structure was washed out earlier in the year and the California Department of Fish and Game did not required a notch this year due to high flows.
- xiv. All 6 culvert flap-gates were tied open.
- xv. The weir was raised by one foot.
- xvi. Barrier was breached on an emergency basis, but complete remove wasn't done until providing permit compliance of complete removal to the Corps.
- xvii. Partial barrier closed
- xviii. Fully barrier closed
- xix. Open all year
- xx. Not installed as it is not required in the NMFS BiOp on Long-term Operations of the CVP and SWP.